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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/087,238	03/01/2002	Yoneichi Ikeda	8305-217US (NP127-1)	4274
570 7590 06/01/2007 AKIN GUMP STRAUSS HAUER & FELD L.L.P. ONE COMMERCE SQUARE 2005 MARKET STREET, SUITE 2200 PHILADELPHIA, PA 19103			EXAMINER NGUYEN, TAM M	
			ART UNIT 1764	PAPER NUMBER
			MAIL DATE 06/01/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/087,238

Applicant(s)

IKEDA ET AL.

Examiner

Tam M. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 June 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-6 are rejected under 35 U.S.C. 103(a) as obvious over Molstedt (3,409,542).

Molstedt discloses a process of discharging and transferring upwardly fluidized particles from a dense fluidized layer forming section to an upper section having a diameter that is smaller

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than the dense fluidized layer forming section, wherein an intermediate cylindrical section (cone) is provided between the dense fluidized forming section and the upper section. It is estimated that the diameter of the intermediate section is $1/3$ and $2/3$ times that of the dense fluidized layer forming section and the height of the intermediate section is 1 to 6 times a diameter thereof. Molstedt teaches that the intermediate section has truncated cone ends connected to the dense fluidized layer forming section and said upper section, respectively. The truncated cone end directly connected to the dense fluidized layer forming section has an elevation angle of 60° . Molstedt also discloses that the particles has an average size of from 40 100 microns (40-100 μm) and a gas superficial speed for fluidization within the dense bed is from 0.3 to 2 ft/sec (0.09 to .6 m/sec) and the velocity at the tapered zone is ranging of from 25 to 100 ft/sec. (7.6 to 30.5 m/sec.) See Figure, col. 3, line 8 through col. 4, line 9; and col. 5, lines 7-65.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the process of Molstedt by using an intermediated section with an elevation angle of 85° or greater because the gas velocity within the intermediated section would be the same or similar when using either a shorter-pipe intermediated section with an elevation angle of about less than 85° or a longer-pipe intermediated section with an elevation angle of 85° or greater.

Molstedt does not specifically disclose that the velocity in the intermediated cylindrical section is about 0.9 m/s to 7.2 m/s. However, since the modified process of Molstedt is similar to the claimed process in terms of gas velocity within the dense bed and the intermediated section, it would be expected that the velocity in the intermediated section of Molstedt would be similar to the claimed velocity.

Response to Arguments

The argument that in contrast with the claimed superficial gas velocity of about 0.9 to 7.2 m/s, Molstedt teaches a far greater gas velocity at the tapered zone of 25 to 100 ft/s (7.6 to 30.5 m/s) is not persuasive. Molstedt teaches the velocity at the tapered zone of 25 to 100 ft/s, not the velocity of the intermediated section.

The argument that there would have been no motivation based on Molstedt to lower the gas velocity in the intermediate section because Molstedt increases the gas velocity in the intermediate section with additional gas flow to circulate particles in the process smoothly without surging and slugging in the coking zone outlet (col. 3, lines 68-70) is not persuasive. As discussed above, the process of Molstedt utilized a velocity in the dense bed within the claimed range and the modified intermediated section of Molstedt is similar to the claimed intermediated section. It is reasonably expected that the velocity in the intermediated section of Molstedt is similar to the claimed velocity.

The argument that Molstedt does not recognize that the change in the pressure drop is mainly caused by the structure of the intermediate section, and thus, based on Molstedt, there would have been no motivation to change the elevation angle in such a section is not persuasive because the examiner maintains that the gas velocity within the intermediated section would be the same or similar when using either a shorter-pipe intermediated section with an elevation angle of about less than 85° or a longer-pipe intermediated section with an elevation angle of 85° or greater. The reason or motivation to modify the reference may often suggest what the inventor has done, but for a different purpose or to solve a different problem. It is not necessary that the

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prior art suggest the combination to achieve the same advantage or result discovered by applicant. In re Linter, 458 F.2d 1013, 173 USPQ 560 (CCPA 1972);

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tam M. Nguyen whose telephone number is (571) 272-1452. The examiner can normally be reached on Monday through Thursday.

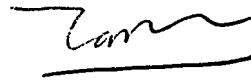
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on (571) 272-1444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Tam M. Nguyen
Examiner
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TN

A handwritten signature in black ink, appearing to read 'Tam', is written over a horizontal line.